



HARDMASTER™ W690

90 MINUTE HIGH STRENGTH BEDDING MORTAR



HIGH STRENGTH BEDDING MORTAR:

Magma HardMaster W690 is a general purpose rapid set and rapid strength bedding mortar which can be opened to traffic just 90 minutes after being mixed and placed. It's rapid set and early strength, reduce construction and road closure times, making it ideal for both planned and emergency repairs. Typical applications include the bedding of inspection chamber frames/covers, gully grates, stanchion posts, kerb stones, setts and other street furniture installations. Compatible for use with concrete, brick and stone substrates. HardMaster W690 Bedding Mortar complies with Department of Transport HD 27/04 Design Manual for Roads and Bridges Vol 7 Sec 2 Clause 3.11.

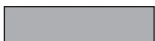
PRODUCT FEATURES:

- Reaches trafficable strength in 90 minutes
- Excellent strength
- Smooth trowelable consistency

CUSTOMER BENEFITS:

- Minimum downtime
- High performance
- Easy to use

COLOURS AVAILABLE:



Grey



RECOMMENDED USE:



Utilities



Car Parks



Highways



Facilities

APPLICATION METHOD:



Trowel

BECAUSE ROADS MATTER™

PREPARATION OF SUB-BASE:

All application substrates must be sound, clean and free from dust, dirt, debris, oil, grease and other contaminants. Proper surface preparation is vital to ensure the successful application and durable performance of the concrete. All substrates should be pre-wetted with water prior to the application of the concrete, however any standing water should be removed.

MIXING INSTRUCTIONS:

For best results **HardMaster W690** should be mixed using a steel **Meon OX Pro Mixing Paddle** coupled with a twin handled mixing unit. Mix each 25kg unit with 2.5 - 3.0 litres of clean water (which complies with **BS EN 1008 - water for concrete**). Pre-measure the required volume of water into a clean mixing vessel and steadily add the powder to the water. The product should be mixed for 2-3 minutes until a smooth, homogenous mortar consistency is achieved. Due to the rapid setting nature of **HardMaster W690**, only ever mix a quantity of material that can be used and placed within 5 minutes of the end of mixing.

DO NOT re-mix or add extra water to extend the working time of the material.

APPLICATION:

HardMaster W690 Bedding Mortar should be applied at a thickness of 10mm - 100mm in a single pass. If thicker sections are required, this can be achieved using the layer-on-layer method.

HardMaster W690 Bedding Mortar should be placed on the prewetted application area without delay after mixing. Apply an even bed thickness to the whole application area ensuring a nominal 5-10mm excess thickness is present to allow for bedding of the frame. Lift the frame in to position (using suitable lifting equipment as necessary) and lower the frame onto the still malleable mortar. Care should be taken to avoid creating air voids under the frame at this stage. The frame should then be tamped down to the correct height, ensuring the top of the frame sits level to surface of the road. Point up the inner and outer exposed surfaces ensuring all voids are filled.

Once the bedding mortar has reached initial set, the backfill concrete - **HardMaster W610 Trowelable** or **HardMaster W615 Flowable** can be mixed and placed.

Recommended ambient application temperature is 5°C to 25°C.

AFTERCARE AND MAINTENANCE:

Tools and equipment can easily be cleaned using water and should be carried out as soon as possible after application.

STORAGE CONDITIONS:

Palletised **HardMaster W660** Bedding Mortar should be stored in cool dry areas clear of the ground sheeted or under cover and stacked not more than two pallets high. The product should be used on a first in - first out basis. Individual bags of **HardMaster W660** Bedding Mortar should be stored in sealed original packaging in a dry location at temperatures between 5°C and 25°C. Avoid exposure to water, frost or heat - high temperatures and high humidity will lead to a reduced shelf life.

SHELF LIFE:

12 months when stored under cover, subject to temperature and humidity, in original unopened containers, in accordance with Storage Condition guidelines listed above.

SIZES AVAILABLE:

25kg bags.

TECHNICAL:

PERFORMANCE DATA	
Activator Addition (per 18kg)	2.5 - 3.0 litres
Workability	5 - 10 minutes
Set Time	< 20 minutes
Shrinkage	Less than 0.001%
Density	2250 - 2300 kg/m ³
Yield (per 25kg)	12.2 litres
COMPRESSIVE STRENGTH	
90 minutes	20 N/mm ²
4 hours	25 N/mm ²
1 day	45 N/mm ²
7 days	60 N/mm ²
28 days	75 N/mm ²
FLEXURAL STRENGTH	
90 minutes	4.5 N/mm ²
4 hours	6.5 N/mm ²
1 day	7.5 N/mm ²
7 days	8.0 N/mm ²
28 days	8.5 N/mm ²
The above figures are derived from laboratory testing at 20°C and 65% relative humidity	

DESIGN MANUAL FOR ROADS & BRIDGES - Vol 7 Sec 2:

The department of Transport HD 27/04 Clause 3.11 Mortars for bedding ironwork may be trafficked when the strength is expected to be 20N/mm². For rapid construction, this should be achieved within 2 hours.

QUALITY CONTROL:

Tested and packaged to quality control procedure in accordance with **BS EN ISO 9001**.

HEALTH AND SAFETY:

Health and safety advice, which must be followed, can be found on the Material Safety Data Sheet. Users are advised to wear face mask, goggles, gloves and overalls when handling, mixing and applying cementitious products.

These products contain cement and have an alkaline reaction with moisture/water. Therefore protect hands and eyes. In case of contact with eyes consult a doctor. Familiarise yourself with the material safety data sheets before using this product. If you need a copy please call our technical team on **023 9220 0606**.